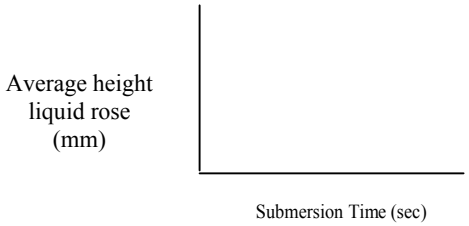
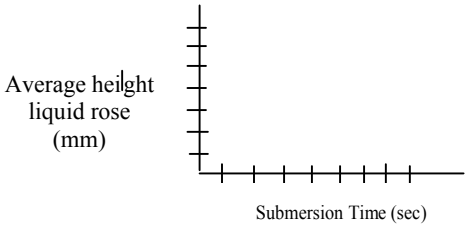
Methods for Constructing Line Graphs

Use a LINE GRAPH when the IV data is continuous. EX: time, volume, distance

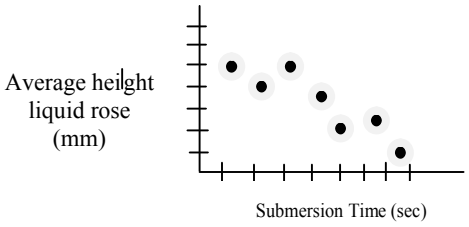
STEP #1
* Draw axes.
* Place IV on the x-axis (horizontal) and the DV on the y-axis (vertical).
* Place the units in parentheses next to the variable.



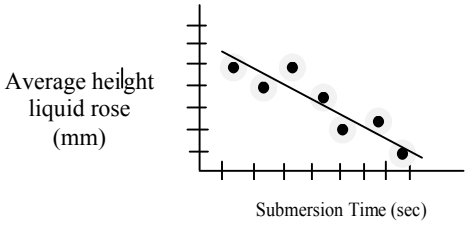
STEP #2
* Determine a scale that is appropriate to cover the range of measurements for each variable.
* The scale does NOT have to be the same for the IV and the DV.
* The scale must be of equal intervals. (Ex: 10,20, 30… NOT 10, 13, 22, 35…)
* Here's a trick to determine an interval: **(Largest value – smallest value) / 5 = interval**
* Any number that is easily counted in multiples works well.
* Begin with a number that is less than the smallest value and end with an interval that is slightly larger than the largest value.



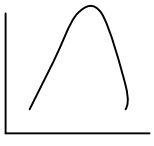
STEP #3
* Plot Data Points.



STEP #4
* Construct a line of best-fit.
* The line of best-fit is drawn so an equal number of data points fall to either side of the line.



Other Examples of Best Fit Lines:



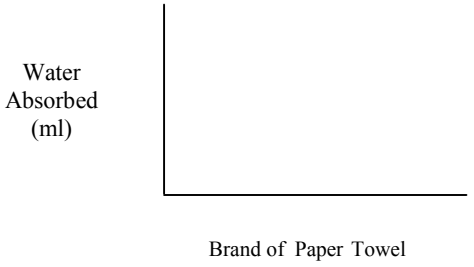
STEP # 5
* Add a TITLE to your graph that includes a Graph # , the IV and the DV.

Ex: Graph 1: The Effect of Submersion Time on Height the Liquid Rose.

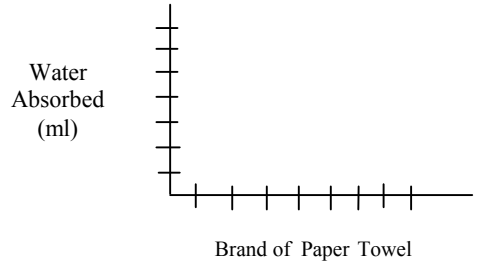
Methods for Making a Bar Graph (Histogram)

Use a BAR GRAPH when the IV data is categorical. EX: months, gender, days of the week

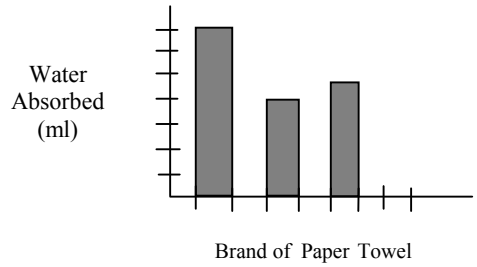
STEP #1 * Draw axes.
* Place IV on the x-axis (horizontal) and the DV on the y-axis (vertical).
* Place the units in parentheses next to the variable. (No units for IV)



STEP #2 * Subdivide the X-axis to show the categories for the IV.
* Decide on a scale for the Y-axis.
* The scale must be of equal intervals. (Ex: 10,20, 30… NOT 10, 13, 22, 35…)
* Here's a trick to determine an interval: **(Largest value – smallest value) / 5 = interval**
* Any number that is easily counted in multiples works well.
* Begin with a number that is less than the smallest value and end with an interval that is slightly larger than the largest value.



STEP #3 * Draw a vertical bar from the value of the IV to the corresponding value of the DV.
* Leave a space between each bar.



STEP # 4 * Add a TITLE to your graph that includes a Graph # , the IV and the DV.
Ex: Graph 1: The Effect of Paper Towel Brand on the Amount of Water Absorbed